



## IBM PowerVM V2.2 refresh includes new function

### Table of contents

<a href="#">1 Overview</a>	<a href="#">2 Description</a>
<a href="#">1 Key prerequisites</a>	<a href="#">3 Product number</a>
<a href="#">1 Planned availability date</a>	<a href="#">4 Order now</a>

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### Overview

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The previously announced IBM® PowerVM™, which delivers industrial-strength virtualization for AIX®, IBM i, and Linux™ environments on IBM POWER® processor-based systems, has been enhanced with the following:

- Shared Storage Pools now allows up to four systems to share a common pool of pre-allocated storage. Shared Storage Pools are able to provide quick provisioning and efficient storage utilization for virtualized IBM Power Systems™ workloads. Shared Storage Pools technology can simplify server and storage administration, reduce SAN infrastructure, and provide a framework that allows for easier movement of live workloads across Power® frames.
- Live Partition Mobility provides a 2X improvement in Live Partition Mobility concurrency.
- Network Load Balancing balances network traffic across redundant Shared Ethernet Adapters.
- Active Memory™ Deduplication detects and removes duplicate memory pages to optimize memory usage in Active Memory Sharing configurations.
- NPIV support for storage provisioning to virtual Fibre Channel HBAs prior to LPAR activation is improved. Virtual Fibre Channel HBAs are more visible to the SAN administrator, which simplifies SAN provisioning and management of virtual machines using NPIV.

New customers will receive the latest updates automatically upon ordering.

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: RE001).

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### Key prerequisites

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Refer to Software Announcement [210-196](#), dated October 07, 2010 for technical requirements.

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### Planned availability date

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- October 14, 2011: PowerVM 2.2 Service Pack
- December 16, 2011: PowerVM 2.2 Service Pack (Shared Storage Pools enhancements)

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## Description

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PowerVM delivers industrial-strength virtualization for AIX, IBM i, and Linux environments on IBM POWER processor-based systems. Power Systems servers coupled with PowerVM technology are designed to help clients build a dynamic infrastructure, reducing costs, managing risk, and improving service levels.

IBM PowerVM V2.2 contains the following enhancements:

- Live Partition Mobility provides a 2X improvement in Live Partition Mobility concurrency.
- Network Load Balancing balances network traffic across redundant Shared Ethernet Adapters.
- Active Memory Deduplication detects and removes duplicate memory pages to optimize memory usage in Active Memory Sharing configurations.
- Shared Storage Pools (which requires PowerVM 2.2 Service Pack available December 2011, creates pools of storage for virtualized workloads), and can improve storage utilization, simplify administration, and reduce SAN infrastructure costs. The enhanced capabilities enable four systems to participate in a Shared Storage Pool configuration, which can improve efficiency, agility, scalability, flexibility, and availability.
  - Shared Storage Pools flexibility and availability improvements include:
    - Storage Mobility is a new function that allows data to be moved to new storage devices within Shared Storage Pools while virtual machines remain completely active and available. This ability to move data to new devices can improve performance and allow for the retirement of old storage devices without incurring any application outages.
    - VM Storage Snapshots/Rollback is a new function that allows multiple point-in-time snapshots of individual virtual machine storage. These point-in-time copies can be used to quickly roll back a virtual machine to a particular snapshot image. This functionality can be used to capture a VM image for cloning purposes or before applying maintenance.
  - Shared Storage Pools
    - Increases storage utilization by allowing underutilized storage trapped in traditional storage configurations to be used by a pool of servers. Thinly provisioned virtual disks are an option with Shared Storage Pools, which eliminates the waste of disk resources that are not in use. In cases where full provisioning of storage is desired up front, thickly provisioned virtual disks are also available.

IBM PowerVM Virtual I/O Server (VIOS) life cycle enhancements:

The VIOS release and service strategy is being enhanced to provide up to three years of service pack support for each release. Additionally, there will be limited support for some new hardware on previous technology levels. This new release and service policy is limited to future VIOS updates starting with VIOS V2.2.1 and will not include previous VIOS versions.

### **Improved PowerVM software manageability:**

IBM intends to provide support for future releases via service pack, and interim fixes for the entire service life of the release. By providing support through service packs and interim fixes throughout the entire service life of a Technology Level, clients would be able to use more consistent service procedures for maintaining VIOS.

### **Support for new hardware on previous releases:**

Beginning with the VIOS V2.2.1 release, service updates will be delivered through both service packs and interim fixes for the entire service life of the VIOS release. Enhancements such as processor speed improvements, new I/O adapters, and new

processors within a family (for example, IBM POWER7®) may be supported on previous releases by installing a service pack.

Clients can get support for the new hardware by installing a service pack that contains the necessary changes to support the new hardware on a previous release. This support will typically only include toleration of the new hardware, not exploitation of new hardware features such as additional page sizes.

Exploitation of new hardware features will generally require installing the latest release, although in some cases, upgrading to a later VIOS release is necessary to fully exploit new hardware features.

New hardware that requires pervasive changes will not be supported on previous releases. Examples of hardware that would require pervasive changes would include things such as a new processor family or a new I/O bus.

Systems that offer preload or pre-installation of VIOS will only include the latest available release. Preload and pre-installation for previous releases of VIOS will not be available.

### **Blade Network Technologies® (BNT®) VMready® Switch**

A new IBM BNT switch feature called VMready recognizes PowerVM and preserves the IBM BNT switch attributes during Live Partition Mobility events. This new switch feature simplifies the Live Partition Mobility process when BNT VMready switches are deployed in conjunction with IBM Power systems running PowerVM virtual machines.

For further details on the VMready feature on IBM BNT switches, refer to the Hardware Announcement [111-077](#), dated April 12, 2011.

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## **Reference information**

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Refer to Software Announcement [210-196](#), dated October 07, 2010, for product details and ordering information.

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## **Product number**

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Program number	Program name
5765-PVX	IBM PowerVM Express® Edition V2.2
5765-PVS	IBM PowerVM Standard Edition V2.2
5765-PVE	IBM PowerVM Enterprise Edition V2.2

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If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=211-354>

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